

19. An improved cathode material comprising EMD, said EMD having an initial open circuit voltage of about 1.639 volts or higher.

20. An improved cathode material comprising EMD, said EMD having a compressed density of about 3.162 grams per cubic centimeter or higher.

21. An improved cathode material comprising EMD, said EMD having a % MnO<sub>2</sub> of about 91.9 or higher.

22. An improved cathode material comprising EMD, said EMD having a % Mn of about 60.1 or lower.

23. An improved cathode material comprising EMD, said EMD having a % structural H<sub>2</sub>O of about 3.28 or lower.

24. An improved cathode material comprising EMD, said EMD having a BET surface area of about 23.5 sq. meters per gram or lower.

25. An improved cathode material comprising EMD, said EMD having a total pore volume of 27 cubic centimeters per kilogram or lower.